

stead of lying parallel, the younger beds run transgressively across the upturned denuded ends of the older. The greater the disturbance of the older rocks, the more marked is the unconformability. In Fig. 323, the lower series of beds (*c*) has been upturned and denuded before the deposition of the upper series (*a b*) upon it. In this instance, the upper worn surface of the limestones (*c*) has been perforated by boring mollusks below the sandy stratum (*b*).

An unconformability forms one of the great breaks in the geological record. In Fig. 221 (p. 864), by way of illustration, we see at once that a notable hiatus in deposition, and therefore in geological chronology, must exist between the older conformable series, *a b c*, and the later strata by which these are covered. The former had been deposited, folded, upheaved, and worn down before the accumulation of the newer series upon their denuded edges. These changes must have demanded a considerable lapse of time. Yet, looking merely at the structure in itself, we have evidently no means of fixing, even relatively, the length of interval marked by an unconformability. By ascertaining, from some other region, the full suite of formations, we learn what members of the succession are wanting. In this way, it would be discovered that the greater part of the Carboniferous system, the whole of the Permian, and the Trias and the Lias are absent from the ground represented in Fig. 323 (compare Fig. 221). The mere violence of contrast between a set of vertical beds below and a horizontal group above, is in itself no certainly reliable criterion of the relative lapse of time between their deposition; for obviously, an older portion of a given formation might be tilted on end, and be over-